

AMENDMENTS TO THE SPECIFICATION

Paragraph 3, bridging pages 1 and 2, please amend as follows:

A flashlight lamp with automatic light adjustment is usually provided with a control circuit and light sensor elements. As shown in FIG. 4 6, once the power source is turned on, a transistor V1 is used as switch to create intermittent pulses so that ~~transformer~~ T1 initially obtains an alternating voltage. Voltage increase is obtained via ~~transformer~~ T1, and it secondarily obtains an alternating voltage of about 60V. The alternating voltage is half commutated via diode D1 to become a direct voltage, which then charges main capacitor C2 and trigger capacitor C3. Once the flashlight lamp has been sufficiently charged, the synchronous light contact of the camera connects to the flashlight circuit. A conventional flashlight lamp circuit uses a transistor as switch controller of the charging current, and an RC circuit is used for the oscillation frequency loop. However, due to a relative high transistor-resistor-capacitor error value, the circuit stability is altered. In addition, the conventional flashlight adjustment circuit uses a Zener diode with an avalanche voltage of 270V to determine when charging stops. At this time, it is necessary to control transistor 2SC1623 to a conducting status, which then generates a high signal informing the CPU that there is voltage saturation. The CPU then outputs another signal to stop charging. Effective charging stop then is performed via transistor DTC143EK. The use of transistors as control means in association with a feedback loop therefore creates a relatively high error value, which may induce erroneous actions. Furthermore, the VR variation range is excessively large, which renders difficult initial settings of the automatic light adjustment.

Page 4, paragraph 1, please amend as follows:

FIG. 4 is a schematic view of a flashlight activation circuit according to an embodiment of the invention; ~~and~~

Page 4, paragraph 2, please amend as follows:

FIG. 5 is a schematic view of an oscillation voltage increasing circuit according to an embodiment of the invention; and

Page 4, paragraph 3, please amend by inserting the new paragraph as follows:

FIG. 6 is a block diagram of a flashlight lamp circuit with automatic light adjustment, according to the prior art.

Paragraph 4, bridging pages 5 and 6, please amend as follows:

Referring to FIG. 3, because diverse main capacitors may be chosen, the resistance of the RC integral circuit needs adjustment. Capacitor C410 has a range between 0.47 μ F and 0.1 μ F, resistor R424 has a range between 1K and 200, but light adjusting variable resistor VR of the SMT is relatively more difficult to adjust, due to a different circumference. If resistor VR uses a too small value, the electric current will increase and will easily deform the curvature. An end of the variable resistor VR ~~end~~ therefore connects to a resistor, so that VR adjustment is not excessively sensitive. For example, if the variable resistor VR is 10 Kilo-ohms, the variation may be within a range of 1 Kilo-ohms, which shows relative sensitivity; if VR is 2 Kilo-ohms, the variation is within a range 200 ohms of lesser sensitivity.

Therefore, an embodiment of the invention uses a the variable resistor VR of 2 Kilo-ohms serially connected to a resistor of 8.2 Kilo-ohms. These initial settings of the automatic flashlight allow easier and more accurate adjustment.

Page 6, paragraph 1, please amend as follows:

A conventional flashlight control circuit uses transistors to control charging and cutoff after full charging. In contrast, the present invention uses an IC converter U1. FIG. 4 shows an DC/DC converter, using the electric current of a Darlington circuit DL to control the capacitor charging speed. A 0.11-ohms resistor R1 is used to limit the electric current of the Darlington circuit DL. A fast switch diode ESD and 3904 are associated to control the voltage (from VCC3 voltage divider) fed back to the IC U1 and regulate the oscillation frequency of the DC converter.

Page 6, paragraph 2, please amend as follows:

Referring FIG. 5, the Darlington circuit of the IC is used to provide a sufficiently high electric current, which passes through a voltage transformer to obtain an increased voltage. The DC converter generates an alternating pulse width modulation signal that becomes via a voltage transformer T1 an alternating signal with increased voltage, undergoes commutation via the diode, to charge the main capacitor C. Once the charging voltage has reached 300V, the evaluation for stopping charging is made via a Zener diode ZD with an avalanche voltage of 270V. Avalanche effects occur at 270V, which results in a voltage stabilization around 300V. At this point, two locations have to be controlled. First, a voltage division fed back to a reference regulator of the IC has to be around 1.25V to stop

charging. Second, a second voltage division controller 3904 emits a Strobe_Ready signal (originally high voltage, after Ready turn to a low voltage) to the CPU. Associating an accurate voltage division with the IC for achieving voltage feedback allows obtaining a circuit globally more stable and more precise in activation.